



Office for Civil Nuclear Security

Department of Trade and Industry



The State Of Security In The Civil Nuclear Industry

And

The Effectiveness Of Security Regulation

A Report To The Secretary Of State For Trade And Industry

By

The Director Of Civil Nuclear Security
October 2000 – March 2002

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Introduction

1. This is my first report on the state of security in the civil nuclear industry and the effectiveness of regulation since my staff and I transferred from the United Kingdom Atomic Energy Authority (UKAEA) to the Department of Trade and Industry (DTI) on 1st October 2000ⁱ. Although future reports will be produced annually, this report covers the eighteen months that have elapsed since then. As this report is to be published, I have included some background information about nuclear security regulation that has not been made available before. The report also addresses issues raised by the terrorist attacks last [September](#) against the World Trade Center in New York and the Pentagon in Washington, which provoked widespread public concern about the vulnerability of nuclear facilities to terrorist attack. For these reasons, the report is more detailed (and therefore longer) than subsequent, annual reports are expected to be.

2. This new series of reports incorporates previous annual reports on the work of the Standing Committee on Police Establishments ([SCOPE](#)), as foreshadowed in the last such report published in June 2001ⁱⁱ.

Background

3. Security has been a preoccupation for the civil nuclear industry since its emergence from the nuclear weapons programme in the 1950s. The earliest cases concerned the investigation of spies, such as Klaus Fuchs and Nunn May, convicted of passing atomic secrets to the former Soviet Union. Espionage is still a concern although, with the end of the Cold War, the main threat is posed by countries like Iraq and Iran attempting to circumvent export controls to acquire proliferation-sensitive technology to further their own nuclear weapons programmes. The proliferation threat is often overlooked by commentators but the dangers are real, as illustrated by the conviction of an individual in Germany in 2000 for passing details about sensitive uranium-enrichment technology to the Iraqi authoritiesⁱⁱⁱ.

4. However, since the late 1960s, the focus of public concern has become the threat that terrorists would seek to sabotage a nuclear facility, or steal fissile or radioactive material to fabricate an improvised nuclear or radiological device. Public concerns are often misconceived and exaggerated. There have been no terrorist

attacks against any nuclear facilities in the United Kingdom and no known examples of malicious activity that could have caused a nuclear explosion or a serious release of radioactivity. Nevertheless, a successful sabotage attack on a nuclear facility could cause widespread radioactive contamination and loss of life. The theft of nuclear material could also have serious consequences. It is essential, therefore, that stringent security precautions are taken by the civil nuclear industry, well above normal commercial standards.

5. Maintaining an effective security regime against the threats of terrorism and proliferation is not straightforward. Those contemplating attacks may have the advantage of surprise, selecting the time, method and location best suited to their purposes. Nuclear facilities are large industrial complexes which cannot operate without substantial numbers of workers and regular deliveries of supplies, complicating effective controls on access. The amount and sensitivity of nuclear material varies between sites, new construction and maintenance work sometimes involving numbers of contractors have to be catered for, and some sites need to attract tenant organisations. Furthermore, for business reasons and to meet various statutory requirements, a considerable amount of information about these sites and about nuclear technology is made publicly available.

6. Security is not just about physical barriers and guarding arrangements around fixed sites. Computers and safety-critical electronic systems inside sites have to be protected against hacking and other forms of interference. In addition, nuclear material has to be transported for a variety of reasons, usually within the country by road or rail, and abroad by sea or, in certain limited circumstances, by air. It helps that most sites are located within tight-knit local communities: workers and their families and the local police are encouraged to report strangers behaving suspiciously. My Office maintains close links with the security and intelligence services, the police and foreign counterparts, to ensure that prompt action can be taken in the event of advance warning of any hostile activity. Sites are protected by a range of interlocking physical barriers, technical systems and security procedures. Frequent, random security patrols, both inside and outside sites, on foot, in vehicles, and with trained police dogs, are a valuable deterrent. The most sensitive sites are protected by [armed police officers](#). Staff, visitors and vehicles are subject to search or may be scanned electronically. Sensitive areas and systems within sites are given additional protection, providing defence in depth. These measures in combination are designed to deter or counter any form of ground-based attack assessed as falling within the capabilities of terrorist groups and others posing a threat, and to reassure workers inside sites that they are not at risk. Other measures are taken to safeguard nuclear material in transit and protect civil nuclear sites from attack from the air.

7. I recognise that many individuals hold genuine concerns about the safety and security of nuclear power and are entitled to express their views, or to demonstrate outside civil nuclear sites. Sometimes, however, demonstrators attempt to bypass security arrangements, exposing themselves and others to risk. Security precautions at sites have to distinguish between this type of irresponsible behaviour and real threats. The objective, therefore, is to contain intruders at or within outer perimeters of sites. Inner security arrangements are designed to counter the most serious threats.

The Office For Civil Nuclear Security (OCNS)

8. The DTI's Office for Civil Nuclear Security (OCNS) regulates security arrangements for the protection of nuclear material and proliferation-sensitive technology within the civil nuclear industry. My Office exercises statutory powers granted to the Secretary of State for Trade and Industry under the Atomic Energy Act 1954 and the Nuclear Installations Act 1965 (which embody a regime of Ministerial Directions) and the Nuclear Generating Stations (Security) Regulations 1996. OCNS was originally the Security Branch of the UKAEA, but its responsibilities have broadened over the years, reflecting developments in the industry. OCNS was transferred from the UKAEA to the DTI on 1st October 2000ⁱ, in response to a recommendation by the Trade and Industry Committee of the House of Commons, following an inquiry into various safety and security issues at Dounreay^{iv}. I welcomed that decision. It had become increasingly untenable that the Government's security regulator should be legally a component of a nuclear operator itself subject to regulation, contrary to guidelines issued by the International Atomic Energy Agency (IAEA)^v. At the time of the transfer, the then Minister for Energy announced that OCNS would function within the DTI as an independent unit, with full autonomy in regulatory and operational matters. OCNS is administered as a component of the DTI's Nuclear Industries Directorate (NID) and co-operates closely with NID policy branches on security policy, regulatory and international issues^{vi}.

9. The nuclear operating companies, including British Nuclear Fuels Ltd. (BNFL)^{vii}, the UKAEA^{viii}, Urenco^{ix} and British Energy^x, take their security responsibilities seriously, but cannot be expected to regulate themselves. The threats to be countered could affect national security and require specialised support from the security and intelligence agencies, the police and the armed services. To retain public confidence, the Government must also demonstrate that security requirements cannot be cut back or undermined by commercial pressures, although the companies themselves are entitled to expect that the security standards and procedures imposed are reasonable and realistic. However, analytical tools and predictive models are of limited value: getting the balance right requires expert knowledge and careful judgement. I have adopted the following mission statement to address these various complicating factors:

To ensure that the nuclear materials and sensitive information of the civil nuclear industry, and those employed in the industry, are effectively protected against deliberate acts that threaten national security, the environment or public safety, and help retain public confidence, without imposing unjustifiable burdens on the companies subject to regulation.

10. OCNS is currently 35 strong, with annual expenditure of around £1.6 million. Most of our security specialists are recruited from outside the DTI, after careers in the security and intelligence agencies, the armed forces and the police. However, I would also welcome applications from industry specialists, or graduates with degrees in risk and security management.

11. OCNS has no direct responsibility for safety matters within the civil nuclear industry, for safeguards and nuclear materials accountancy issues, or for nuclear material on sites operated or sponsored by the Ministry of Defence. However, OCNS cooperates with government departments and agencies with these responsibilities. In June last year, I signed a Memorandum of Understanding with Her Majesty's Chief Inspector of Nuclear Installations to promote closer collaboration with the Health and Safety Executive's Nuclear Installations Inspectorate (the NII, the safety regulator)^{xi}. In addition, we liaise with counterparts overseas and the International Atomic Energy Agency (IAEA)^{xii}.

Threat Assessments

12. It is vital, given the potentially serious consequences of hostile or malicious activity directed against civil nuclear sites or material, that security measures are designed to counter realistic threats. Resources must not be wasted on ineffective or unnecessary security precautions. Over the past eighteen months, we have evolved a new procedure to assess security threats, incorporated in a key planning document known as the Design Basis Threat (DBT). The document is based on intelligence about the motives, intentions and capabilities of potential adversaries. It is designed to provide a definitive statement of the possible scale and methods of attack that could be faced at civil nuclear sites, or when nuclear material is being transported. The DBT excludes possible security threats and methods of attack that are judged not to be relevant to the civil nuclear industry in the United Kingdom. The DBT also takes account of the availability of countermeasures and contingency arrangements provided by the police, the Ministry of Defence and other agencies. For obvious reasons, the assessment is classified SECRET and no further details can be published. However, the document now provides the basis for the design, implementation and management of security measures and systems by the regulated civil nuclear companies. It is also being used by OCNS to develop or revise mandatory and discretionary security standards and guidance, to evaluate site and transport security plans prepared by the operators, and to monitor compliance. This criteria-based approach is regarded by the IAEA as best practice^{xiii} and is also being adopted by other, foreign regulatory authorities.

13. The companies subject to regulation have welcomed this criteria-based approach because it provides a transparent, rational basis for security planning, resource management and quality control. Nevertheless, security threats are seldom constant, and it is neither effective nor efficient to maintain all available security measures at a constantly high state of readiness. Indeed, changes in alert states have some deterrent value. Although sites are required to have in place both the physical and technical defences, and the guarding, surveillance and response resources needed to operate at the highest levels of vigilance, OCNS also issues specific threat assessments and alerts to the operating companies, received from the central security authorities and the police, to enable tailored, additional measures to be activated or reduced in response to prevailing circumstances.

Security Standards

14. The security standards and procedures specified by OCNS are confidential but reflect published guidance on the *Physical Protection of Nuclear Material and Nuclear Facilities* issued by the IAEA. OCNS has been closely involved with the IAEA and other foreign counterparts in developing the guidance and is the designated UK authority specified in these guidelines^{xiv}.

Security Vetting

15. We have to assume that any attacks by proliferating states or terrorist groups will be planned carefully in advance. Although most individuals working within the industry are reliable and trustworthy, those planning attacks may seek to use a disaffected or suborned insider with exploitable access. Attempts by criminals to obtain saleable material or information must also be circumvented. In addition, individuals may pursue harmful or irresponsible activities on their own account, perhaps in ignorance of the possible consequences. For these reasons, OCNS supervises a comprehensive system of security vetting applicable throughout the industry. The basis for security vetting for national security purposes was set out in a statement to Parliament by the Prime Minister on 15th December 1994. For OCNS, vetting is used as an element in controlling access to sites and nuclear material, as well as sensitive information. As a vetting authority, OCNS has access to intelligence and criminal records. Depending on the level of clearance required, my staff may also undertake credit reference checks and conduct background enquiries, including interviews with supervisors and other referees.

Applying Vetting Criteria

16. Comprehensive national guidance on applying vetting criteria forms the basis for the decisions we take on clearance. In considering previous criminal convictions, my Office is authorised to take account of spent convictions under the Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975, for the purpose of safeguarding national security. We place particular value on individuals being open and honest about any past convictions. However, decisions to withhold or withdraw clearances could have serious consequences for the individuals affected. Less serious offences may not lead to a clearance being refused, if individuals have been honest in declaring them and there is reason to believe they will not re-offend. For similar reasons, we may decide not to withdraw security clearance from existing employees, if they are prepared to cooperate fully in resolving doubts about their continuing fitness to hold a security clearance.

17. I have been reassured to note, in the four years I have held this appointment, that the trade unions, as well as the companies' managers, have supported the requirement for vetting within the civil nuclear industry. The unions were helpful two years ago in allaying their members concerns when I decided to increase the clearance level for security guards employed at British Energy and BNFL Magnox nuclear power stations, following an incident when a guard had attempted to compromise the station's access control system. I like to think that attitudes within the industry are

influenced by the efforts we make to be fair and reasonable, and to grant clearance in straightforward cases without undue delay. We have also introduced an appeals process, ultimately to the independent Security Vetting Appeals Panel established by the Cabinet Office, although this right of appeal is limited to existing employees.

18. My Office can only exercise limited control over demand for security clearances, which is determined by turnover within the industry and affected by significant developments such as the commissioning last September of the new [Sellafield MOX plant](#) (SMP). Over the last twelve months, OCNS has issued 9,178 vetting clearances and 3,356 revalidations, the greater majority at the lowest clearance level where volume and time pressures could undermine accuracy and objectivity. I am indebted to all members of OCNS engaged in this activity for the care they take, under unremitting pressure, to ensure clearance applications are dealt with promptly and fairly.

19. The policy and practice of national security vetting gives full regard to the requirements of the Human Rights Act, the Data Protection Act, the Regulation of Investigatory Powers Act and other relevant legislation.

Inspections

20. My team of Inspectors, currently five strong, track developments in security policy and practice, and advise on particular issues. However, their primary responsibility is reviewing site security plans and undertaking inspections at civil nuclear sites. This is the fourth major element of activity undertaken by OCNS, complementing [threat assessment](#), [standard setting](#) and [vetting](#). It is impossible, without a thorough and comprehensive programme of site inspections undertaken by experts, to identify security weaknesses or monitor compliance with standards and regulations. Before 1996, the Inspectorate had been reduced to the point where it could not sustain a regular programme. In that year, however, OCNS was given a new status as a regulatory unit reporting to the Chairman of the UKAEA, reinforcing its core rôle. The Inspectorate was also strengthened. In the years since then, OCNS has completed inspections at every nuclear site subject to regulation, covering all aspects including information and personnel security procedures, as well as physical security and guarding. A comprehensive series of inspections has also been concluded covering all areas at the large Sellafield complex and its satellite at Drigg. In addition, a wide range of security improvements at sites has been initiated, most of which have now been completed.

21. A growing database of reports also now exists describing circumstances and security arrangements at sites in considerable detail, as well as work completed or in hand to remedy deficiencies. These reports are made available to site licensees and the NII. The work of the Standing Committee on Police Establishments ([SCOPE](#)) has also enabled my Office to integrate and, to some extent, trade off improvements in physical security arrangements against guarding and patrolling requirements at sites.

22. In the first half of 2001, before the terrorist attacks last [September](#) in the United States, my Inspectors had embarked on another full annual round of site inspections, with the principal objective of following up improvement requirements

and recommendations made in previous reports. They had completed nine full inspections, covering four nuclear power stations, three separate facilities at Sellafield and two other sites. The inspectors had also, between them, made several shorter site visits to investigate particular issues or offer advice on the spot. However, the programme had to be suspended immediately following the September terrorist attacks in the United States, to allow the Inspectors to concentrate their efforts on advising sites on the implementation of additional security measures. On the other hand, site visits have been stepped up, so there has been no reduction in coverage, although monitoring progress achieved in meeting earlier improvement requirements has been temporarily interrupted. Due to staff shortages and other pressures, I do not expect to resume a full programme of compliance inspections until July at the earliest.

Inspectors Travel Commitments

23. OCNS Inspectors spend a good deal of time travelling, mainly by road. Most of the 31 civil nuclear sites subject to regulation or oversight are in outlying parts of the country on or near the coast, from Dounreay at the tip of Caithness to Dungeness in Kent. Travel this past year has been especially heavy. My Inspectors are now driving around 12,000 miles a year on business and may spend four or five days undertaking a site inspection. I wish to take this opportunity to record my appreciation for their expertise and commitment, and the patience shown by their families. A current [programme](#) to recruit more staff will help spread the burden. Nevertheless, I have been considering whether other approaches should be tried. OCNS Investigating Officers undertaking vetting enquiries are already recruited to work from home within the usual recruitment areas for civil nuclear sites in Scotland, the North-West and the South. One of our Site Inspectors is also about to move to the North-East and we aim, over the next few years, to recruit others based within reasonable travelling distance of Sellafield and nearby sites.

The Future For The Inspectorate

24. Although progress has been temporarily affected by last [September](#)'s terrorist attacks, I have started to change the way the Inspectorate operates, partly in response to requests from the regulated civil nuclear operators. OCNS Inspectors have each been assigned sites of their own to advise and monitor. This will allow OCNS Inspectors to get to know their assigned sites and key company personnel better than had been possible hitherto. They are also developing closer working links with the [NII's](#) site safety inspectors, following the Memorandum of Understanding signed last year, as well as with unit commanders at sites policed by the [UKAEA Constabulary](#).

25. The civil nuclear companies are required to employ security specialists of their own, to oversee the implementation of OCNS requirements and manage security within their organisations on a day-to-day basis. Company security managers are assigned to each site; the larger companies also employ security teams at corporate headquarters level. Most of these managers have similar backgrounds, and are as competent and committed, as my own staff. I take the view, therefore, that the companies regulated by my Office should have sufficient autonomy to manage their own security arrangements, provided there is no loss of focus or oversight by OCNS.

26. My aim, over the next three years or so, is to encourage the companies to undertake their own site audit programmes, to suitable quality standards, the results of which I would be prepared to take into account in my Office's inspection process. This will free OCNS Inspectors to drill down in greater detail on particular issues and undertake spot checks. In addition, in a move away from the present prescriptive regime of standards and regulations, the companies are being allowed to propose alternative arrangements, providing comparable levels of security but more closely reflecting company policy or local circumstances. The [Design Basis Threat](#) document has been written partly with this aim in mind, to provide the necessary foundation. The combination of this extra investment in effort and more flexible, focussed working arrangements should benefit all the stakeholders involved, enhancing both security at sites and regulatory oversight.

Sellafield MOX Plant

27. Last year, the Government decided to permit operations to commence at the Sellafield MOX Plant (SMP), which had been constructed by BNFL to manufacture mixed-oxide (MOX) fuel for the Japanese and European markets from plutonium oxide stored on site. OCNS had been closely involved for over eight years in the design of the security arrangements for SMP. Regular inspections during construction served to ensure that stringent security measures were being implemented (and adapted as necessary) to reflect changes in design and operation. Immediately prior to commissioning, further inspections were carried out by my Office, including full tests of all security systems and a re-validation of security procedures. These showed that the plant met all our security requirements, except in respect of some outstanding vetting clearances for which temporary compensating arrangements had to be made.

28. My Office had also taken full account of the terrorist attacks in the United States last [September](#), but concluded that commissioning SMP did not increase the vulnerability of the site to this form of attack.

The Transport Of Nuclear Material

29. OCNS also regulates arrangements by the civil nuclear operators for the secure transport of sensitive categories of nuclear material. My Office is the UK's designated national authority under the *Convention on the Physical Protection of Nuclear Material*^{xv}, for shipments to and from overseas destinations.

30. Arrangements for the shipment of MOX fuel to Japan fall under my regulatory control. The first shipment had already taken place in 1999 and the second, of French-manufactured MOX fuel, between January and March last year, in British flagged ships operated by Pacific Nuclear Transport Ltd (PNTL - a BNFL subsidiary company with minority shareholdings by Cogema of France and the Japanese nuclear power utilities). This shipment was completed successfully, without incident and to schedule. Both PNTL ships carried deck-mounted naval guns and an armed escort provided by the UKAEA Constabulary. Other security measures were also taken to prevent boarding or unauthorised interference with the MOX fuel. Planning for the return shipment of MOX fuel from Japan to the UK is now well underway and will

take place sometime later this year - this is the fuel sent with the first shipment in 1999, but rejected by the Japanese utilities after BNFL had revealed that quality measurement data had been falsified by members of staff. My Office has reviewed all security arrangements in the context of the terrorist attacks last September in the United States, as have the United States and Japanese regulatory authorities. All the authorities concerned are satisfied that the security arrangements to be taken are amply robust to deal with any potential threats. My Office has taken note that some degree of interest in this shipment may be anticipated from anti-nuclear groups.

31. One shipment of irradiated fuel from Japan to France for reprocessing was also completed without incident by a PNTL vessel in 2001. Bans on the transport of irradiated fuel imposed by Germany and France, due to the presence of low levels of contamination on the flasks in use, were lifted after approvals from the safety authorities and shipments from countries on the European mainland to Sellafield for reprocessing resumed in late 2001. In addition, over 400 transports of less sensitive fissile nuclear materials, including irradiated nuclear fuel, have been carried out within the UK and to and from overseas destinations in the period since 1st April 2001. This number includes regular movements by train of spent fuel from the nuclear power stations sent to Sellafield for reprocessing. There were no security incidents associated with any nuclear transports.

32. An existing post has been upgraded recently to Principal Inspector to concentrate full-time on transport security issues, partly in anticipation of provisions to be included in new [Regulations](#) extending direct regulation to about twenty transport companies.

Information Security

33. The responsibilities of OCNS include supervising arrangements within the civil nuclear industry to protect sensitive information, including investigating any loss or compromise of information. The Government's protective marking system is applied throughout the industry to classify information with defence, national security or proliferation implications. Periodic inspections are undertaken by OCNS to validate the companies' information security arrangements.

34. In the period since 1st October 2000, OCNS has evaluated and accredited seventeen IT systems used by the operating companies to store or process sensitive information. Most systems were fairly small in scale, but the number included three larger corporate data networks. In addition, a new methodology was developed with the [NII](#) to assess security requirements for safety-critical systems, to guard against the risk of unauthorized interference: two pilot inspections were also undertaken. Good progress has been made advising the operating companies on implementing the BS7799 standard for information security management systems.

35. Another new Principal Inspector post is being created to enable more focussed effort to be devoted to this increasingly complex subject.

Counter-proliferation

36. Most of the standards and procedures specified by OCNS for the protection of information have a dual purpose, to protect information that could be exploited by terrorist groups, or technology of potential value to countries seeking to develop nuclear weapons. The [Urenco Group](#), with plants at Capenhurst in Cheshire, and in the Netherlands and Germany, operates sensitive centrifuge technology for the enrichment of uranium. My Office, with our German and Dutch counterparts, constitutes the security authority for Urenco under the terms of the Almelo Treaty.

Regulation Of Nuclear Power Stations

37. OCNS took over direct regulatory authority for the nuclear power stations operated by BNFL and British Energy, following the [transfer](#) of this Office from the UKAEA to the DTI on 1st October 2000. Hitherto, OCNS had acted in an advisory capacity with regulation being undertaken by DTI policy officials. Provision was included in the [Anti-terrorism, Crime and Security Act 2001](#), introduced by the Government as a direct response to last [September](#)'s terrorist attacks in the United States, to introduce new [Regulations](#) applicable throughout the industry.

Training And Awareness

38. As part of our responsibility for enhancing security awareness within the civil nuclear industry, my Office disseminates training material and sponsors nominees from the companies to attend specialist security courses run by various government agencies.

September 2001

39. I have already alluded in this report to the terrorist attacks that took place in the United States last September, subsequently attributed to Usama bin Laden's Al Qaida terrorist group. The details will be familiar. On the 11th September, two hijacked passenger aircraft were flown into the twin towers of the World Trade Center in New York, causing a devastating fire and the collapse of both buildings. A third hijacked passenger aircraft was crashed into the Pentagon building in Washington. Very large numbers of people were killed, injured or bereaved. The terrorists themselves had been prepared to sacrifice their own lives in the process. These ruthless, indiscriminate, but well-planned and executed, attacks prompted a significant reassessment of the threat posed by Islamic extremist terrorist groups.

40. Although the details must remain confidential, I can confirm that my Office undertook an immediate, thorough review of the implications for the civil nuclear industry, based on advice provided by the Security Service. We also worked closely with the [NII](#), undertaking several joint audits on the ground at sites. Although public attention since those attacks has focussed almost exclusively on the danger of another attack using hijacked passenger aircraft, we had to take account of the possibility that any further attacks by Al Qaida, or any other extremist Islamic terrorist organisations,

might be mounted from the ground. Terrorists would assume, correctly, that precautions against hijacking would now be much more stringent in the wake of those attacks. We already had in place comprehensive, stringent security arrangements, principally against the threat posed by Irish republican terrorist groups. Nevertheless, chicanes and other measures were put in place promptly or strengthened around all civil nuclear sites, in case terrorists sought to use vehicles loaded with explosive to crash through perimeter defences. Security arrangements protecting certain sensitive areas inside sites have also been extended and reinforced.

41. In addition, measures have been taken to protect civil nuclear sites and Sellafield in particular from the possibility of any further attacks using hijacked aircraft, in conjunction with the Ministry of Defence. Although various options were given very careful consideration, the measures selected involved strengthened warning procedures and interdiction by RAF interceptor aircraft. Commentators in the media made much of a decision by the French authorities, following the attacks in the United States, to station surface-to-air missiles around the large nuclear site at Cap le Hague, near Cherbourg, as well as at other, selected non-nuclear sites. However, national circumstances differ. Moreover, the missiles around Cap le Hague have since been removed.

42. After the terrorist attacks last September, my Office contributed to briefs for Ministers and answers made to many Parliamentary Questions. A network of specialist committees and working groups was established under Cabinet Office auspices to review security and emergency planning arrangements nationwide. We were able to demonstrate, in regard to the civil nuclear industry, that stringent security measures were already in place under Government supervision and that specific, additional precautions were being implemented. Colleagues in the Department's Nuclear Industries Directorate took the lead in discussions with the Ministry of Defence on strengthening precautions against the risk of air attack. It was also their responsibility to review and, as necessary, to strengthen emergency planning arrangements. I believe all reasonable precautions have been taken, commensurate with the threat, although the position will continue to be kept under review.

Anthrax

43. Shortly after the World Trade Center and Pentagon attacks, letters containing anthrax bacillus were sent to media offices in New York and Florida, and to two Senators in Washington, killing several people. My Office was kept in touch with developments by the central security authorities. We passed on detailed guidance to the civil nuclear companies on precautions to take to recognise and contain any anthrax-contaminated mail received in this country, and to protect post-room staff.

Anti-Terrorism, Crime And Security Act 2001

44. Several new statutory provisions were included in the Anti-terrorism, Crime and Security Act 2001^{xix}, enacted by Parliament in response to last September's terrorist attacks in the United States, to enhance civil nuclear security. I have already noted that provision has been made to enable new [Regulations](#) to be introduced to

strengthen and extend the scope of regulation by OCNS. New powers were also granted to the [UKAEA Constabulary](#) to protect any designated civil nuclear site and to exercise full police powers within 5 km of civil nuclear sites. It was made an offence to disclose information intentionally or recklessly that could prejudice the security of a nuclear site or nuclear material – information that potentially could be useful to a saboteur or terrorist.

Confidentiality Versus Transparency

45. The nuclear industry has often been criticised for sheltering behind a cult of secrecy inherited from its origins in the Government’s nuclear weapons programme. In response to this criticism and to meet various statutory requirements on disclosure, a good deal of information has been published in recent years. However, there is a danger that terrorist groups might be able exploit publicly available information collated from a variety of sources, including the Internet. For many years, OCNS has issued guidance to civil nuclear companies to protect exploitable information from disclosure. However, we recognised after the attacks last [September](#) in the United States that the balance between providing information of legitimate public interest and protecting the national interest against terrorism and proliferation may need to be re-considered. I am chairing an expert group composed of representatives from the main operating companies and the industry’s regulators to take this forward.

46. In the immediate aftermath of the attacks in the United States, many questions were asked about the vulnerabilities of civil nuclear sites and security measures in place against terrorist attacks. In the interests of national security and in keeping with long-standing Government policy, very little could be offered in reply, except assurances that security is kept under continuous review and stringent measures are being taken against the risk of terrorist attack.

The UKAEA Constabulary

47. The UKAEA Constabulary^{xvi} (UKAEAC) is a core component of the security regime supervised by OCNS. Its main function is to provide an armed response capability at designated civil nuclear sites in the event of a terrorist attack. UKAEAC detachments at sites also provide perimeter and internal patrols, including dog patrols, and a police presence at all open perimeter gates and at certain designated sensitive buildings and areas inside sites. Unarmed UKAEAC police officers guarding the periphery of civil nuclear sites are generally able to deal with any minor public order incidents involving anti-nuclear demonstrators without having to wait for assistance from county forces, or risk involvement by armed officers. Furthermore, because the UKAEAC is authorised to investigate criminal activities inside sites, the evidence discovered can be useful to OCNS in determining whether the individuals involved should have their security clearances revoked. With my full support, the UKAEAC maintains close liaison links with police Special Branches and other specialist police units. The Constabulary is also tasked by OCNS to provide armed escorts for sensitive nuclear material when being transported, in accordance with the [Convention on the Physical Protection of Nuclear Material](#). Both the Chief Constable and the Constabulary’s Police Authority (of which I am a member) publish annual reports^{xvii}.

48. I had set up the Standing Committee on Police Establishments (SCOPE), shortly after taking over as Director, in the wake of a public dispute in 1998 about police numbers at Dounreay. The circumstances were investigated by the House of Commons Trade and Industry Committee^{iv}, which concluded, *inter alia*, that there had been pressure to reduce police numbers at several sites to save costs. SCOPE was created to reassure Ministers, Parliament and the general public that policing levels at sites protected by the UKAEAC would be determined in future by my Office on security grounds and not by the companies' commercial interests. Over the past twelve months, a third full round of reviews has been conducted and some further increases in numbers have been made. Separate reports on the outcome of the first two rounds have already been publishedⁱⁱ. Over the full three years that SCOPE has been functioning, police numbers (and supporting civilian staff) have been increased by 27% against the baseline 1998-99 establishment (478), excluding a supernumerary complement of 42 police officers to escort [MOX shipments](#). In addition, relative increases have been made in the number of authorised firearms officers and dog patrols at sites. Increased staffing at headquarters and at the police training centre near Sellafield have also strengthened the Constabulary's command, operational, intelligence and training capabilities. I was particularly pleased that the Constabulary has succeeded recently in bringing policing levels to within 2.5% of the 2001/02 establishment.

49. In the aftermath of the terrorist attacks last [September](#) in the United States, I required increased searches of personnel and vehicles, and additional patrols, to be made. I am in no doubt that the additional resources approved by SCOPE over the past three years enabled the Constabulary to find the extra capacity needed, although officers have still had to work additional overtime over a prolonged period. I should like to take this opportunity to draw attention to the professionalism, discipline and commitment displayed by all ranks of the UKAEA Constabulary. Police officers on duty are expected to remain vigilant in all weathers around the clock. Authorised firearms officers are well aware that they may be called upon at any time, without warning, to use their weapons and that, after such an event, their actions would be closely scrutinised.

50. As the Government's security regulator for the civil nuclear industry, I welcome the proposals announced by the Secretary of State for Trade and Industry on 28th November 2001 to detach the Constabulary from the UKAEA and re-establish it as a stand-alone force under a new, statutory Police Authority, subject to the necessary legislation. However, the Constabulary does not police the general public directly. Its sole function is to protect designated civil nuclear sites and material subject to regulation. It is important, therefore, that my rôle in specifying and verifying the security and security-related standards to be met by the Constabulary will be fully maintained under these new arrangements. My Office will also continue to maintain close, professional contacts with the Chief Constable and other senior officers (eg. on sensitive operational and intelligence matters). In addition, I shall ensure, on behalf of the Secretary of State, that the new Police Authority continues to be advised by my Office on security matters. With these aims in mind, I am proposing to create a new [Principal Inspector](#) post to strengthen oversight of policing (and guarding and security management) issues.

51. While it would not be appropriate for me to remain a member of the new statutory Police Authority, I expect to continue to attend meetings as an observer to monitor developments, provide advice and raise issues of performance when I think this is needed. I shall also retain SCOPE for the time being, although the Committee's rôle may evolve to meet changing circumstances.

Liabilities Management

52. In November 2001, the Secretary of State for Trade and Industry announced proposals to set up a Liabilities Management Authority^{xviii}, to assume responsibility for the Government's interests in the discharge of public sector civil nuclear liabilities managed by BNFL and the UKAEA. The LMA will be expected to work in partnership with site licensees, as well as the safety, security and environmental regulators, to achieve the most effective and safe means of discharging these liabilities. It will look to deepen the level and breadth of expertise in nuclear clean-up in the UK and to foster competition as a means of achieving that aim. Consistent with the need to ensure the highest safety, security and environmental standards, the LMA will develop options for liabilities management, including the management of licensed nuclear sites. It will also be expected to operate in an open and transparent fashion.

53. Because there are potential regulatory and security implications, OCNS is working with policy officials and regulatory counterparts to develop proposals for issues to be addressed before the new body comes into being. We shall need to ensure, in particular, that any new management structures or operators brought in by the LMA can continue to deliver effective security management in response to regulatory requirements.

The Attitude Of Companies Subject To Regulation

54. The companies making up the civil nuclear industry are accustomed to an indifferent press at best. It is fair to record, however, that all the companies subject to regulation have co-operated with OCNS throughout this period in implementing and maintaining stringent security standards. They also responded promptly and effectively when required to implement additional security measures after the terrorist attacks last [September](#) in the United States. I am satisfied that all the companies concerned accept the need for effective security regulation. Implementation of security requirements is also much improved.

The Effectiveness Of Security Regulation

55. The transfer of OCNS to the Departmentⁱ has significantly improved the effectiveness of this Office in regulating civil nuclear security. Hitherto, its anomalous position had inhibited the responsible authorities from providing a full service of intelligence reporting. These difficulties disappeared virtually at a stroke, following the transfer. In the past, the operating companies subject to regulation had also been inclined to prevaricate in complying with security standards and guidance issued by this Office from within the UKAEA, or to appeal to the Department's policy

and sponsor officials. Although the latter almost invariably accepted our advice, this created further delay. This tendency has also disappeared, now that my Office has delegated regulatory authority to exercise the Secretary of State's statutory powers on all matters affecting civil nuclear security.

56. In addition, the transfer has strengthened cooperation between my Office and colleagues in the Department's Nuclear Industries Directorate (NID), to the point now where OCNS is routinely informed and consulted about all important developments and decisions affecting the industry. The transfer has proved to be timely because initiatives by the Government on the future of nuclear power, [liabilities management](#) and the introduction of private finance could bring about significant changes in the way the industry develops in the future. Security will be an important dimension in all these developments, particularly in the aftermath of last [September](#)'s terrorist attacks and OCNS should continue to be closely involved.

57. The transfer to the DTI has also enabled OCNS to embark on a much-needed programme to strengthen management effectiveness, including better internal communications, the introduction of clearer objective setting, and more transparent performance and value-for-money controls. Work is also in hand on improving training provision.

The Funding Regime

58. 85% of OCNS costs are recovered by charges levied on the operating companies, with the remainder currently provided by the Department. I am exploring the feasibility of moving to a net running costs regime to give OCNS greater flexibility to vary resources in line with regulatory demands and help underpin our operational and regulatory autonomy.

New Regulations

59. The current legislative framework for security regulation is outdated and unsatisfactory. It has grown *ad hoc* to reflect the development of the industry since the 1950s, with the result that different parts of the industry are governed by separate, inconsistent regimes. In addition, there are some gaps and anomalies: a very few small licensed sites fall outside formal regulation altogether, so that regulation has to be exercised through indirect, rather than direct, means. I have already reported that enabling provision was included in the [Anti-terrorism, Crime and Security Act 2001](#)^{xix} to introduce new Regulations to address these difficulties. Work is well advanced on the details, with the intention to undertake formal public consultation in the near future and promulgate the new Regulations sometime later this year. The core requirement is for operators to submit a Security Plan for each site to OCNS for approval, setting out the proposed security arrangements and to observe the provisions of the plan once approved.

60. The main change envisaged is the introduction of direct regulation of the transport of nuclear material, replacing the current system of indirect regulation. At present, nuclear operators are required to ensure that their contracts with carriers

require the latter to take adequate security measures. However, it is difficult for operators to ensure that effective security is maintained throughout the journey and there is a strong case for placing responsibilities on those best placed to discharge them. Under the new Regulations, transporters of sensitive nuclear material will need to be approved by OCNS by submitting a statement of their security systems and arrangements, much as for site operators above. Given the critical need to ensure the security of nuclear material while in transit and the concerns that arise from time to time about the protection currently provided, this is a necessary extension of regulation in the national interest.

61. Currently, regulation is focussed on the types of nuclear material that present significant security risks, following the internationally agreed categorisations for such materials. We have considered whether there is a case for extending regulation to lower risk nuclear materials used for research, and industrial and medical purposes outside nuclear sites. We have concluded, however, that this would not be justified, given the protection already provided through the controls of the Radioactive Substances Act 1993 (RSA), which regulate access and storage, and the need to avoid duplicated regulation. It has been agreed in principle, however, that OCNS will strengthen co-operation with the Environment Agency, which administer the RSA, to ensure that the RSA regime takes due account of security concerns

Impact Of The Regulations

62. As mentioned, the aim of reform is to rationalise rather than tighten regulation. Overall, the weight and balance of regulation should not significantly change. Additional costs will be modest. All the companies affected are being consulted fully in the development of these new Regulations.

Recruitment And Retention

63. We are increasing staff numbers by six more posts, to augment [vetting](#) activities, take on the additional work caused by the new [Regulations](#) and reinforce our capacity to undertake [compliance inspections](#). I consider these extra staff are essential if my Office is to continue to regulate security in the civil nuclear industry comprehensively and effectively, given the heightened terrorist threat prompted by last [September's](#) attacks in the United States.

64. However, demand from the private sector for experienced security professionals has grown markedly in recent years, in response to the spread of IT, the threats from terrorism and organised crime, increasing levels of fraud, and dangers operating overseas. I have lost two experienced Inspectors over the past eighteen months and faced considerable difficulty and delay recruiting replacements. Unfortunately, four of my most experienced staff are either retiring or leaving in the next twelve months, compounding the difficulties we anticipate finding suitably qualified replacements and filling new posts. A special pay addition is under consideration, to aid retention and recruitment.

International Activity

65. OCNS is the United Kingdom's designated security authority for civil nuclear matters under various treaties, international conventions and agreements, working in conjunction with the DTI's Nuclear Industries and Export Control and Non-Proliferation Directorates. In addition, OCNS may be tasked by the Department to manage nuclear security assistance projects overseas, mainly in Russia, the countries of the former Soviet Union and in Eastern Europe.

66. We keep in close touch with our regulatory counterparts, particularly in the United States, France, Sweden and Germany. We also maintain close links with the IAEA's Office of Physical Protection and Materials Security. In the last eighteen months, my staff have been closely involved with policy colleagues in the DTI and our regulatory counterparts overseas in developing proposals to revise the *Convention on the Physical Protection of Nuclear Materials*^{xv}. We have also been involved in considering proposals made by the IAEA, following last September's terrorist attacks, to strengthen the agency's programmes for providing advice and assistance on nuclear security to member States^{xx}. OCNS acts as the UK's point of contact for the IAEA's illicit trafficking database.

67. My Office is one of the main contributory agencies supporting the IAEA's nuclear security programmes. In the last eighteen months, one of my inspectors has led an IPPAS advisory mission to Indonesia and another took part in a similar mission to Bulgaria^{xxi}. My Assistant Director has also been helping to develop a new workshop run by the IAEA on the [Design Basis Threat](#) approach: workshops have been held so far in the Czech Republic, Poland, Slovakia, Kazakhstan and Russia^{xxi}. My Deputy Director has been invited to join a new body to advise the Director General on the agency's nuclear security programme.

68. Over the same period, direct assistance has continued to be provided to our regulatory counterparts to upgrade security at nuclear facilities in Romania, Poland and Uzbekistan, following similar projects completed in recent years in other countries in Eastern Europe and the former Soviet Union. OCNS also collaborated with our Swedish counterparts in upgrading security systems installed on a nuclear-powered, container vessel based at Murmansk and further projects in Russia are under discussion. The dangers in Russia from insurgency and trafficking are serious, but severe under-funding hampers the maintenance of effective security arrangements. Help in assisting the Russian authorities to improve nuclear security arrangements offers substantial benefits for the UK's own national security, in terms of both threat reduction and public safety.

OCNS Advisory Board

69. An Advisory Board has been established, as announced by the Minister for Energy at the time this Office was transferred from the UKAEA to the DTIⁱ. The Board is chaired by the Department's Director General for Energy. The DTI's Director of Nuclear Industries and representatives from the Security Service, the NII and industry are also members. The Board has offered advice on various policy documents, including the [DBT](#) paper, annual work plans and this report.

Conclusions

70. I am confident that stringent security precautions are being taken to protect civil nuclear sites and material in the United Kingdom, commensurate with current threats to national security. Moreover, activities promoted by OCNS in recent years, with Departmental support, enabled the regulated nuclear industry to respond promptly and effectively in strengthening security arrangements in response to last [September](#)'s terrorist attacks in the United States. Satisfactory arrangements have also been made with the Ministry of Defence to protect civil nuclear sites from attacks from the air.

71. The past eighteen months have been marked by substantial change. Much has been achieved but work still needs to be completed to underpin the regulatory authority and autonomy of this Office. The new [Regulations](#) to be introduced later this year will allow OCNS for the first time to supervise a modern, comprehensive and effective security regime, backed by clear statutory powers and funding arrangements. However, the extra staff currently being recruited will be needed to undertake the additional work created and strengthen oversight generally in the aftermath of last [September](#)'s terrorist attacks in the United States.

April 2002

Footnotes

- i DTI press notice issued 3 October 2000 at:
<http://213.38.88.195/coi/coipress.nsf/2b45e1e3ffe090ac802567350059d840/1441247bbec6cb398025696d00523bd8?OpenDocument>
- ii 2nd SCOPE Report paragraph 16 at <http://www2.dti.gov.uk/energy/pdf/scope2.pdf>
- iii The SCHAAB Case
- iv HMSO Report HC 815 issued 28 July 1998
- v IAEA publication INFCIRC/225/Rev.4 (Corrected) paragraph 4.2.3.3 at
http://www.iaea.org/worldatom/program/protection/inf225rev4/rev4_content.html
- vi DTI/NID/OCNS website at <http://www2.dti.gov.uk/nid/security.htm>
- vii BNFL website at <http://www.bnfl.com/website.nsf/index.htm>
- viii UKAEA website at <http://www.ukaea.org.uk/>
- ix Urenco website at <http://www.urenc.com>
- x British Energy website at <http://www.british-energy.com/>
- xi HSE newsletter issued June 2001 at <http://www.hse.gov.uk/nsd/nsn2401.pdf>
- xii IAEA website at <http://www.iaea.org/worldatom>
- xiii IAEA publication INFCIRC/225/Rev.4 (Corrected) paragraph 4.2.4.1 at
http://www.iaea.org/worldatom/program/protection/inf225rev4/rev4_content.html
- xiv IAEA publication INFCIRC/225/Rev.4 (Corrected) paragraph 4.2.3.2 at
http://www.iaea.org/worldatom/program/protection/inf225rev4/rev4_content.html
- xv IAEA publication INFCIRC/274/Rev.1 at
<http://www.iaea.org/worldatom/Documents/Infcircs/Others/inf274r1.shtml>
- xvi UKAEA Constabulary website at <http://www.ukaea.org.uk/ukaeac/index.htm>
- xvii Constabulary and Police Authority reports for 2000 –2001 at
<http://www.ukaea.org.uk/ukaeac/reports.htm>
- xviii DTI press notice issued 28 November 2001 at:
<http://www.nds.coi.gov.uk/coi/coipress.nsf/2b45e1e3ffe090ac802567350059d840/19f9ef4f0601820b80256b13002e4cb2?OpenDocument>
- xix Home Office summary of the Anti-Terrorism, Crime and Security Act 2001 at:
<http://www.homeoffice.gov.uk/oicd/antiterrorism/atcsa.htm>
- xx IAEA press statement on measures against nuclear terrorism at:
http://www.iaea.org/worldatom/Press/Focus/Nuclear_Terrorism/
- xxi <http://www.iaea.org/worldatom/About/Policy/GC/GC45/Documents/gc45-20.pdf>

3 October 2000

**LAUNCH OF OFFICE FOR CIVIL NUCLEAR SECURITY:
NEW STATUS FOR NUCLEAR SECURITY REGULATOR**

Helen Liddell, Energy Minister, today announced that the Government's security regulator for the civil nuclear industry, until now part of UKAEA, has been transferred to the DTI. Formerly known as the UKAEA's Directorate of Civil Nuclear Security, it will be renamed the Office for Civil Nuclear Security.

Helen Liddell said:

"This change puts the Office for Civil Nuclear Security on a new footing as a government regulator and re-establishes it as a visibly independent of the civil nuclear industry.

"OCNS will operate as an independent unit within DTI, with full autonomy in regulatory and operational matters. The Director will make an annual report to me, which I shall place in the Library of both Houses. OCNS will be advised by an Advisory Board, which will include external appointees, to support its work.

"I am confident that this change provides a sound basis for continuation of OCNS's high professional and regulatory effectiveness."

Notes to Editors

1. The transfer of the government's nuclear security regulator, the UKAEA's Directorate of Civil Nuclear Security (DCNSy) to DTI on 1 October, and its renaming as the Office for Civil Nuclear Security (OCNS), reflects the Government's commitment, first made in 1998, to separate DCNSy from UKAEA and re-establish it on a basis visibly independent of the civil nuclear industry.
2. Regulation of security in the civil nuclear industry in order to protect against the threats of terrorism and nuclear proliferation is the responsibility of the Secretary of State for Trade and Industry. Until now, this role has been carried out on Government's behalf by the UKAEA's Directorate of Civil Nuclear Security. As the UKAEA's role has changed, however, Government has recognised that it is no longer appropriate for the security regulatory function to be carried out by UKAEA.

3. Following a comprehensive review, in which a number of options for DCNSy's future status were closely examined, the Government concluded that the best course was for it to be established as an independent unit within DTI. The Director will retain full autonomy in regulatory and operational matters.

4. OCNS will make an annual report to the Minister for Energy which will be placed in the libraries of both Houses of Parliament. It will be advised by an Advisory Board including externally appointed members to support OCNS' professional role.

5. OCNS is located at Harwell, Didcot, Oxfordshire. There will be no change of location as a result of transfer.

Department of Trade and Industry 1 Victoria Street London SW1H 0ET